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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/605,520	06/27/00	UNGER	M 20174-000230

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EXAMINER

FREAY, C

ART UNIT

PAPER NUMBER

3746

DATE MAILED:

08/24/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/605,520	Applicant(s) UNGER ET AL.	
	Examiner Charles G Freay	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-291 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claims 1-291 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 20) <input type="checkbox"/> Other: |

DETAILED ACTION

Election/Restrictions

The following restriction and election of species requirement is an initial election requirement.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-108, drawn to an apparatus and a method for controlling or causing a fluid flow in an elastomeric device, classified in classes 417 and 137.
- II. Claims 109-291, drawn to a method of microfabricating an elastomeric structure, classified in class 216.)

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case process could be used to make conduits in a structure which intersect each other and which are separated by a third member.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Further, because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

This application contains claims directed to the following patentably distinct species of the claimed invention:

If Group 1 above is elected then one species from each of the following species sets must be elected:

Species Set 1: (Arrangements of the microfabricated device)

Species 1 shown in Figs. 23A and 23B, species 2 shown in Figs. 24A and 24B, species 3 shown in Figs. 26A and 26B, species 4 shown in Fig. 27, species 5 shown in Figs. 28A-D, species 6 shown in Fig. 29, species 7 shown in Fig. 30, species 8 shown in Fig. 31 A-d, species 9 shown in Fig. 32, species 10 shown in Fig. 33, species 11 shown in Fig. 36, species 12 shown in Fig. 37, species 13 shown in Fig. 38, species 14 shown in Fig. 39, species 15 shown in Fig. 40, species 16 shown in Fig. 41, species 17 shown in Fig. 42A-J, species 18 shown in Fig. 43, species 19 shown in Fig. 44a-D, species 20 shown in Figs. 45 A-B, species 21 shown in Figs. 46A-B, species 22 shown in Fig. 47, and species 23 shown in Fig. 48.

Species Set 2: (Species of Fabrication Methods)

Species 1 shown in Figs. 1-7, species 2 shown in Figs. 8-18, species 3 shown in Figs. 35A-D.

Species Set 3: (Materials of the elastomeric structure)

Species 1 where the material is of the group as set forth in claim 68, species 2 where the material is of the group as set forth in claim 69, species 3 where the material is as set forth in claim 70, and species 4 where the material is as set forth in claim 71.

Species Set 4: (material of planar substrate)

Species 1 where the material of the planar substrate is glass, and species 2 where the material of the planar substrate is elastomeric material.

Species Set 5: (the various means or methods for deflecting the membrane)

Species 1 where the membrane is deflected through pressurization, species 2 where the membrane is deflected through electrostatic actuation with details of the conductive materials used in the electrostatic structure set forth below in the Sub-species 1, species 3 where the membrane is magnetically actuated with the details of the means for applying a magnetic field set forth in the below sub-species 2.

If species 2 is elected above then one of the following subspecies from Sub-Species Set 1 must be elected: sub-species 1 where the conductive material is an intrinsically conductive elastomer (as in claim 23), sub-species 2 where the conductive material is an elastomer doped with a conductive material which is fine metal particles (as in claim 25), and sub-species 3 where the conductive material is an elastomer doped with a conductive material which is carbon (as in claim 26).

If species 3 is elected above then one of the following subspecies from Sub-Species Set 2 must be elected: sub-species 1 where the magnetic field is applied by a magnet, sub-species 2 where the magnetic field is applied by a magnetic coil, sub-species 3 where the magnetic portion of the membrane is an intrinsically magnetic

elastomer, sub-species 4 where the magnetic portion of the membrane is an elastomer doped with a magnetically polarizable material, and subspecies 5 where the magnetic portion is a elastomer doped with a permanently magnetized material.

Species Set 6: (the various materials of the conductive positions for when the membrane is electrostatically actuated)

Species 1 where the conductive material is an intrinsically conductive elastomer, species 2 where the conductive material is an elastomer doped with fine metal particles, and species 3 where the conductive portion is an elastomer doped with carbon.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, there are numerous generic claims to the various species and inventive groups. Because there is such a vast number of claims directed to the numerous different inventions and species associated with the present application a listing of the generic claims related to the various embodiments would be unrealistic and is not provided.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include

all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G Freay whose telephone number is (703)308-0639. The examiner can normally be reached on M,T & Fr 9:30 -6; W & Th 2:30-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on (703)308-0102. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703)308-7763 for regular communications and (703)308-7763 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0861.


Charles G Freay
Primary Examiner
Art Unit 3746

CGF
August 23, 2001